

Optimizing the allocation of employees for training programmes

Buddhika Wickramarachchi* and Annista Wijayanayake

*Department of Industrial Management, Faculty of Science,
University of Kelaniya, Sri Lanka*

**Email: buddhikamadushani.04@gmail.com*

The Human Resource (HR) department of any organization plays a vital role in decision making. All HR managers commit for dedicated corporate trainings to ensure that their employees have a better understanding of their assigned work and be able to achieve the organizational goals. If the human resource practices are conducted in an effective and optimized manner, it will leverage extra benefit to the organization. Since the resources are scarce in every situation, any company could offer a limited number of training opportunities based on the allocated training budget. The main problem that is encountered is the current system's inability to identify the most value adding training programmes which are aligned to the company goals. However, when the demand for a training programme exceeds the available capacity, the best decision must be taken to optimise the allocation of right people to the right training programs to fill the competency gap. Decision making in HR Management tends to be more subjective, if multiple aspects are not considered when making decisions. Unless the trainings are not aligned with the organizational goals, the organization may not be able to achieve the expected company goals in short term, and also competencies will be stagnated in the long run. Therefore, the main objective of this study is to optimize the most beneficial and value adding training programmes which align with each departmental goals of the organisation and to assign the optimal number of employees for each training programme . In the first phase of the study, Analytical Hierarchy Process (AHP) is used to prioritize the training programmes under different criteria in order to achieve the company goals. An Integer Linear Programming model has been developed to maximize the priority values of training programmes, and to find the number of programmes that should be conducted. In the second phase, using the AHP, each department compute the priority values for training programme based on the existing competency gaps. If the demand is higher than the capacity of the training programmes, then an optimization method, similar to LP transportation method is used to assign employees for each programme. This proposed model facilitates requirements of each department to identify the most value adding and strategically aligned training programmes. The results of the study show the training manager was able to map the employees of each department to the most value adding training programme while satisfying the demand of each department. Significantly, this model can also facilitate the training manager to allocate employees for training programmes when the demand for the particular training programme surpasses the capacity or the resources available for the training programme.

Keywords: Analytical hierarchy process, Employee allocation, Integer programming, Optimization, Training programmes